

## **REFRIGERANT MANAGEMENT PROGRAM SECOND TECHNICAL WORKGROUP MEETING SUMMARY NOTES**

On July 31, 2008, the Research Division staff held the second technical workgroup meeting on the Refrigerant Management Program, which integrates two AB32 early action measures: Specifications for New Commercial Refrigeration Systems and High-Global Warming Potential (GWP) Refrigerant Tracking, Reporting, Repair, Deposit, and Recovery for Stationary Refrigeration and Air-conditioning systems. The purpose of this workgroup meeting was to discuss the stakeholder comments on the proposed draft regulation and concept paper that had been publicly released on July 17, 2008.

The draft regulation, concept paper, and staff presentation are posted on the ARB webpage <http://www.arb.ca.gov/cc/reftrack/reftrack.htm>.

The workgroup meeting was well attended in person and via phone by approximately 50 stakeholders representing: refrigerant manufacturers, equipment manufacturers, facility owners, industrial associations, an agricultural association, and local air districts including Monterey Bay Unified, Sacramento Metro, San Joaquin Valley, Santa Barbara County, and South Coast.

At the workgroup meeting staff requested stakeholders to provide their comments by August 18, 2008.

During and after the presentation meeting attendees in the room and attending by conference phone provided comments. A summary of the major points by common topics discussed during the meeting is provided below:

Topic	Comment
Definitions	Use of terms ARB, Executive Officer, and APCO are not consistent. Use throughout the regulation should be consistent.
Definitions	The definition of Best Available Refrigeration Technology (BART) precludes use of high-GWP with a smaller charge size, but that may result in a net benefit.
Definitions	The Best Available Refrigeration Technology definition needs to be clearer in scope, for example is the Btu per refrigerant charge measurement based on the full system, evaporator, caseload, etc.
Definitions	The Carbon Footprint definition incorrectly uses the term, "capacity." This should reflect charge instead of capacity.
Definitions	Defining high-GWP at 150 is a disincentive for incremental improvements in refrigerants, for example a 10 percent reduction in GWP.

Definitions	The regulation and concept paper were not consistent in regards to the IPCC assessment to use for assignment of GWP – the second or fourth assessment.
Definitions	The definition of “Refrigerant” is too expansive and may include compounds that are not high-GWP including all fluids used in direct systems.
Definitions	The definition of “Refrigerant Wholesaler” would include some businesses not specific to the refrigerant wholesaling industry and not include others that are in the refrigerant wholesaling industry.
Definitions	The definition of “HFC” is too expansive and may include compounds that are not HFC refrigerants.
Enforcement	Penalties for non-compliance and enforcement options should be specified in the regulation.
Leak Repair	The request for model and serial number for reporting is not practical. Most commercial systems are not packaged and do not have a model nor serial number. Only each individual component – evaporator, condenser, etc. will have a separate serial number.
Leak Repair	The criteria for when a retrofit and retirement plan is required are not clear; the criteria should be very specific.
Leak Repair	There was a discussion regarding when repairs become a retrofit (e.g., if one compressor is replaced in a year or if 70% of all compressors are replaced throughout the year.). The discussion focused on a comparison of the scope of changes that would define a refrigeration system retrofit and current issues of the range of changes that would define a modification of a major stationary source in the context of New Source Review requirements.
Reclamation Requirement	The goals for reclamation should be deleted. The goals may provide a perverse incentive to extract refrigerant from a system to meet the goals; refrigerant extractions would result in increased leaks. Reclamation goals should include reclamation or destruction.
Refrigeration Systems	The requirement for continuous monitoring is not technologically feasible.
Refrigeration Systems	Energy use reporting for each system is not feasible; there is no sub-metering available on current systems and to require sub-metering on all refrigeration systems is not practical.
Refrigeration Systems	It is not appropriate for an ARB regulation to refer to an ASHRAE standard.
Reporting	Reporting for system components should include only the total charge, type of refrigerant, and amount of refrigerant added.
Reporting	Reporting for system charge size is not feasible for built systems.

Reporting	The facility reporting is too expansive; it would require a full time staff person.
Reporting	The regulatory text should indicate if reports submitted will be considered public records.
Reporting	There should be no certified technician reporting of any kind as it will not be accurate and could be manipulated.
Cylinders	A deposit is not required on refrigerant cylinders as a higher market price as R-22 is phased out will provide incentive required for refrigerant recovery.
Refrigeration Systems	Recommendations for new systems or technology need to consider the effect of reduced charge sizes on energy efficiency and indirect emissions.
Reclamation Requirement/ Cylinders	Market incentives are more effective than proposed reclamation requirements in promoting reclamation of heels from used cylinders and preventing refrigerant venting.
Leak Repair	A follow up test should not be required for systems which are required to use continuous monitoring. A follow up visit would be difficult and costly for remote facilities and the monitoring system should inform facility operators of an unsuccessful repair.

#### Next Steps:

A revised draft regulatory proposal will be released to the public prior to the September 8, 2008, public workshop.

Public workshops will be held as follows:

- Fresno, September 8 (Monday), 2008, 1:00 PM – 4:00 PM (Webcast)
- El Monte, September 12 (Friday), 2008, 10:00 AM – 2:00 PM
- Sacramento, September 15 (Monday), 2008, 10:00 AM – 2:00 PM (Webcast)